

**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)  
(PCT Article 36 and Rule 70)

**28 FEB 2006**

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Applicant's or agent's file reference 112608:EJH:ts	<b>FOR FURTHER ACTION</b> See Form PCT/IPEA/416	
International application No. PCT/AU2004/001393	International filing date (day/month/year) 13 October 2004	Priority date (day/month/year) 15 October 2003
International Patent Classification (IPC) or national classification and IPC  Int. Cl.  A01K 97/24 (2006.01) A01K 97/18 (2006.01)		
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1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
  - a. ☒ (sent to the applicant and to the International Bureau) a total of 6 sheets, as follows:
    - ☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
    - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
  - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Box No. I | Basis of the report   |
| <input type="checkbox"/> Box No. II           | Priority  |
| <input type="checkbox"/> Box No. III          | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/> Box No. IV           | Lack of unity of invention  |
| <input checked="" type="checkbox"/> Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> Box No. VI           | Certain documents cited   |
| <input type="checkbox"/> Box No. VII          | Certain defects in the international application  |
| <input type="checkbox"/> Box No. VIII         | Certain observations on the international application   |

Date of submission of the demand 28 June 2005	Date of completion of this report 03 February 2006
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# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AU2004/001393

## Box No. I Basis of the report

1. With regard to the language, this report is based on:

- ☒ The international application in the language in which it was filed, which is the language of a
- ☐ A translation of the international application into translation furnished for the purposes of:

- ☐ international search (under Rules 12.3(a) and 23.1 (b))
- ☐ publication of the international application (under Rule 12.4(a))
- ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ the international application as originally filed/furnished

☒ the description: pages 1, 2, 4, 6-12, as originally filed/furnished  
pages 5, received by this Authority on 28 June 2005 with the letter of 28 June 2005  
pages 3, received by this Authority on 11 November 2005 with the letter of 11 November 2005

☒ the claims: pages , as originally filed/furnished  
pages , as amended (together with any statement) under Article 19,  
pages 13-17, received by this Authority on 1 February 2006 with the letter of 1 February 2006  
page , received by this Authority on with the letter

☒ the drawings: pages 1/12-12/12, as originally filed/furnished  
pages , received by this Authority on with the letter of  
pages , received by this Authority on with the letter of

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☒ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☒ the claim, No. 3
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

\* If item 4 applies, some or all of those sheets may be marked "superseded."

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/AU2004/001393

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims 7-14, 18-24	YES
	Claims 1, 2, 4-6, 15-17, 25-27	NO
Inventive step (IS)	Claims	YES
	Claims 1-27	NO
Industrial applicability (IA)	Claims 1-27	YES
	Claims	NO

## 2. Citations and explanations (Rule 70.7)

Note: Claim 3 has been cancelled by your amendments

Some general comments:

(a) In the claims, 'beyond' (the end of the shaft) means 'further away' by the dictionary and each citation discloses the coil as being further away from the shaft in exactly the same way as defined and *also* in the same way as shown in your drawings.

(b) All the citations disclose 'retrieval aids' since fish-hooks are retrieval aids. The purpose of a fish-hook is to retrieve a line by disengaging the hook from the mouth of a fish. It appears to me that *where* the hook is disengaged from, a mouth or a snag, near to or remote from the operator, is immaterial as long as it results in overall disengagement and retrieval of the line. Please also note that all the citations except one have the title of 'fishing line *retriever*'.

(c) My objections have been based on the *turns* of a *single* coil. Your claims define that there must be *a* substantially circular coil that engages the line, ie there must be *at least one* such coil; nowhere does it preclude the presence of *another* circular coil, line-engaging or otherwise.

**NOVELTY (N):** Claims 1, 2, 4-6, 15-17, 25-27

(a) US D382628: Claims 1,4-6, 15-17, 25-27

From figures, shaft is the long extension connecting coil to handle, *single* circular coil has more than one but less than two *turns*, each turn of same diameter. In determining the inclination of the coil, we can either take the *plane* on which the coil rests as inclined to the 'coaxial' axis which extends from the end of the shaft *or* take the *axis* of the coil as being inclined to the coaxial axis – either way, this document discloses this feature. If we take the 'plane' approach, we see from say figure 6 that the plane slopes towards the left of the page while the coaxial axis points straight upwards to the top of the page, thus making an acute angle between them. The axis of the coil will be perpendicular to the plane and it will be seen in a similar fashion that this axis also makes an acute angle with the coaxial axis. It is my contention that the shaft stops where the 'bent' portion starts in figure 6, the 'bent' portion onwards, including the turns, being the coil as a whole. This interpretation is in line with your own figures 8, 9, 14, 15, 18, 19 where the coil as a whole can be inclined to the shaft only if we take the 'bent' portion as being part of the coil and not the shaft. A handle for manipulation by a user is also apparent in the drawings.

Continued in Supplemental Box I

## Supplemental Box I

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

(b) US 2397916: Claims 1, 4, 5, 15-17,  
Shaft 5a; single circular coil 7b/8b/9b at 'one' end has more than one but less than two turns 7b/8b. In a similar manner as discussed above, taking either the 'plane' or 'axis' method, we see from fig 2 that both plane and axis of coil (7b/8b/9b) are acutely inclined to the axis of shaft 5a. Please note that you define the line engagement member as being a single coil - 7b/8b/9b is the only single coil that engages the line L on the lower side, the other coil 6b does not engage the line L but is merely connected when necessary to the retriever supporting line L'. Hence the line engagement member 7b/8b/9b is a single coil; it is immaterial whether the retriever as a whole has other engaging/non engaging coils in addition. Of course, there is another line engagement member single circular coil 7a/8a/9a on the 'other' upper side but, as already pointed out, your claim does not preclude this additional possibility. Coil 7a/8a/9a also has all the features defined in your claims in the same way as coil 7b/8b/9b. The 'other' end is 'adapted to in use to be supported by the user for manipulation by the user' via line L.

(c) US 2316500: Claims 1, 2, 4, 5, 15-17,  
Shaft 5; single circular coil 7'/8'/9' at 'one' end is the line engagement member that engages line 10 and has more than one but less than two turns 7'/8'. In a similar manner as discussed above, taking either the 'plane' or 'axis' method, we see from fig 2, both plane and axis of coil 7'/8'/9' are acutely inclined to the axis of shaft 5, the acute angle being formed between 7' and that portion of the axis that 'sticks out' from the shaft at the bottom in figure 2; portion of turn 8' extends outwardly from the perimeter of underlying turn 7' as in figure 2. The coil 6' is not a line engagement member, being connected when necessary only to a retriever supporting line 11. Similar to citation (b) above, there is another line engaging coil 7/8/9 at the 'other' end that also has all the features defined in your claims but of course this additional possibility is not precluded from your claims. The 'other' end is 'adapted to in use to be supported by the user for manipulation by the user' via line 11.

Please note that, as the angle between two axes, or between a plane and an axis, can be measured in both 'clockwise' and 'anti-clockwise' directions, an 'acute' angle in one direction would be 'obtuse' in another direction. Hence the angle in each citation above would be 'acute' in some one direction. Even your figure 1, for example, shows an 'obtuse' angle between the two axes when the axis of the shaft is extended to the right side of the drawing and the angle then measured anti-clockwise from this extended axis to the axis of the coil. Of course, an axis can be extended in either direction for design measurement purposes since an axis is an imaginary line and does not 'stop' at any particular point.

Hence each document discloses all essential features of each claim listed alongside.

**INVENTIVE STEP (IS):** Claims 1-27

Claims 1, 2, 4-6, 15-17, 25-27: as above

(d) US 4086718: telescopic shaft 10

(e) US 2948077: retention member 26

(f) US 2739404: stand-off coil 10

Claims 8-12 each lack an inventive step when US 4086718 is combined with any one of citations (a)-(c); Claim 13 lacks an inventive step when US 2948077 is combined with any one of citations (a)-(c); Claims 18-20 each lack an inventive step when US 2739404 is combined with any one of citations (a)-(c); such combination being obvious to the person skilled in the art (PSA).

Continued in Supplemental Box II

**Supplemental Box II**

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Supplemental Box I

In addition, Claims 8-13, 18-20, 24 each also lack an inventive step when compared to each of citations (a)-(c) on their own; Claims 2, 6, 7, 14, 21-23 each also lack an inventive step when compared to either (b) or (c) on its own; Claims 2, 7, 14, 21-23 each also lack an inventive step when compared to citation (a) on its own. The invention defined in each claim relates to parameters or structures that are merely matters of design choice when the general technical knowledge about the state of the art is used and hence they cannot contribute to patentable invention.

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### Disclosure of the Invention

According to one aspect the invention resides in a retrieval aid intended for use with a flexible line having an object located at the end of the line, the retrieval aid comprising a shaft having a line engagement member mounted at one end, said  
5 engagement member being readily engagable with the line whereby when engaged with the line the engagement member surrounds the line and is capable of movement along the line wherein the engagement member is formed as a substantially circular coil comprising more than one turn but less than two turns,,  
10 the end of the shaft, wherein the central axis of the coil is inclined at an acute angle to the central axis of the shaft and whereby the coils is offset to one side of the central axis of the shaft.

According to another aspect the invention resides in a retrieval aid intended for use with a flexible line having an object located at the end of the line, the retrieval  
15 aid comprising a shaft having a line engagement member mounted at one end, said engagement member being readily engagable with the line whereby when engaged with the line the engagement member surrounds the line and is capable of movement along the line wherein the engagement member is formed as a substantially circular coil comprising more than one turn but less than two turns  
20 each turn being of the same diameter with the turns overlying each other with one end being fixed to the shaft and the other end being the free end and the coil extends outwardly from the end of the shaft, the portion of the coil proximate the free end extending outwardly from the perimeter of the underlying turn and wherein the central axis of the coil is inclined at an acute angle to the central axis  
25 of the shaft.

According to a preferred feature of the invention the adjacent portions of the turns of the coil are spaced from each other.

According to a preferred feature of the invention the coil comprises a approximately  $1\frac{1}{4}$  turns.

- 5 -

more than one turn wherein the central axis of the coils is substantially parallel to the shaft. According to a preferred feature of the invention the stand-off coil is removably supported from the shaft. According to a preferred feature of the invention the stand-off coils is adapted to be clampingly received between the  
5 ends of a pair of interconnected lengths.

According to a preferred feature of the invention the acute angle between the central axis of the shaft and the central axis of the coil is between 10 and 60 degrees.

According to a preferred feature of the invention the coil has a length greater than  
10 one revolution and the free end of the coil extends outwardly from the outer perimeter of the coil. According to one embodiment the central axis of the free end subtends an angle of less than  $90^\circ$  to the central axis of the shaft.

The invention will be more fully understood in the light of the following description of several specific embodiments.

## 15 **Brief Description of the Drawings**

The description is made with reference to the accompanying drawings of which:

Figure 1 is a schematic illustration of a retrieval aid according to the first embodiment;

Figure 2 is a side elevation of the line engagement member according to the first  
20 embodiment;

Figure 3 is an opposite side elevation to that of Figure 2;

Figures 4a and 4b are sectional elevations of couplings according to the first embodiment ;

Figure 5 is a plan view of the line engagement member according to the first  
25 embodiment.

## Claims

The claims defining the invention are as follows:

1. (amended) A retrieval aid intended for use with a flexible line having an object located at the end of the line, the retrieval aid comprising a shaft having a line engagement member mounted at one end and the other end is adapted to in use be supported by the user for manipulation by the user, said engagement member being readily engagable with the line whereby when engaged with the line the engagement member surrounds the line and is capable of movement along the line wherein the engagement member is formed as a single substantially circular coil, wherein the coil comprises more than one turn but less than two turns, each turn being of the same diameter and wherein the coil extends beyond the end of the shaft, wherein the coil is inclined at an acute angle to an axis which extends from the end of the shaft and is coaxial with the central axis of the shaft such that the coil is angularly offset to one side of the central axis of the shaft.
2. (amended) A retrieval aid intended for use with a flexible line having an object located at the end of the line, the retrieval aid comprising a shaft having a line engagement member mounted at one end and the other end is adapted to in use be supported by the user for manipulation by the user, said engagement member being readily engagable with the line whereby when engaged with the line the engagement member surrounds the line and is capable of movement along the line wherein the engagement member is formed as a substantially circular coil comprising more than one turn but less than two turns each turn being of substantially the same diameter with the turns overlying each other, with one end being fixed to the shaft and the other end being the free end and wherein the coil extends beyond the end of the shaft, the portion of the coil proximate the free end extending outwardly from the perimeter of the underlying turn and wherein the coil is inclined at an acute angle to an axis which extends from the end of the shaft and is coaxial with the



central axis of the shaft such that the coil is angularly offset to one side of the central axis of the shaft.

3. (cancelled) A retrieval aid as claimed at claim 1 or 2 wherein the engagement member is supported from the one end of the shaft to extend to one side of the shaft.
4. (amended) A retrieval aid as claimed at claim 1 or 2 wherein the adjacent portions of the turns of the coil are spaced from each other.
5. (amended) A retrieval aid as claimed at claim 1 or 2 or 4 wherein the coil comprises a approximately  $1\frac{1}{4}$  turns.
6. A retrieval aid as claimed at claim at any one of the preceding claims wherein the base of the coil to which the shaft is attached is axially outermost relative to the shaft and the remainder of the coil.
7. A retrieval aid as claimed at any one of claims 1 to 5 wherein the base of the coil to which the shaft is attached is axially innermost relative to the shaft and the remainder of the coil.
8. A retrieval aid as claimed at any one of the preceding claims wherein the shaft is extendable.
9. A retrieval aid as claimed at claim 8 wherein the shaft comprises a plurality of lengths which can be interconnected into an end to end relationship.
10. A retrieval aid as claimed at claim 9 wherein each end of each length is provided with a threaded fitting which can be threadably engaged with a complementary fitting of another length to enable said ends to end interconnection.
11. A retrieval aid as claimed at any one of the preceding claims wherein the shaft is resiliently flexible.

12. A retrieval aid as claimed at claim 11 wherein the shaft is formed of a fibre reinforced plastics material.
13. A retrieval aid as claimed at any one of the preceding claims wherein the shaft supports a retention member which is slidable along the shaft and a cord is fixed at one end to the retention member, the shaft being formed to prevent disengagement of the retention member from either end of the shaft.
14. A retrieval aid as claimed at any one of the preceding claims wherein said coil has an internal diameter less than the width of object supported by the line.
15. A retrieval aid as claimed at any one of claims 1 to 13 wherein said coil has an internal diameter greater than the width of object supported by the line.
16. A retrieval aid as claimed at any one of the preceding claims wherein the line comprises a fishing line and the object comprises a fish hook and/or lure.
17. A retrieval aid as claimed at any one of the preceding claims wherein the device can be used to retrieve a fish hook from the body of a fish.
18. A retrieval aid as claimed at any one of the preceding claims wherein the shaft supports at least one stand-off coil intermediate the length of the shaft, said stand-off coil comprises more than one turn wherein the central axis of the coil is substantially parallel to the shaft.
19. A retrieval aid as claimed at claim 18 wherein the stand-off coil is removably supported from the shaft.
20. A retrieval aid as claimed at claim 18 as dependant from claim 9 or 10 wherein the stand-off coil is adapted to be clampingly received between the ends of a pair of interconnected lengths.

- 21.(amended) A retrieval aid as claimed at any one of the preceding claims wherein the acute angle is between 10 and 60 degrees.
- 22.(amended) A retrieval aid as claimed at any one of claims 1 and claims 4 to 21 as dependant from claim 1 wherein the coil has a length greater than one revolution and the free end of the coil extends outwardly from the outer perimeter of the coil.
- 23.(amended) A retrieval aid as claimed at claim 22 wherein the central axis of the free end subtends an angle of less than  $90^{\circ}$  to the central axis of the shaft.
- 24.(new) A retrieval aid as claimed at any one of the preceding claims wherein the coil is removable from the one end.
- 25.(new) A retrieval aid as claimed at any one of the preceding claims wherein a handle is mounted to the other end.
- 26.(new) A retrieval aid intended for use with a flexible line having an object located at the end of the line, the retrieval aid comprising an engagement member adapted to be mounted to one end of a shaft, the other end of the shaft being adapted to in use be supported by the user for manipulation by the user, said engagement member being readily engagable with the line whereby when engaged with the line the engagement member surrounds the line and is capable of movement along the line wherein the engagement member is formed as a single substantially circular coil, wherein the coil comprises more than one turn but less than two turns, each turn being of the same diameter and wherein the coil will extend beyond the end of the shaft and will be inclined at an acute angle to an axis which extends from the end of the shaft and is coaxial with the central axis of the shaft such that the coil is angularly offset to one side of the central axis of the shaft.

27.(amended) A retrieval aid substantially as herein described with reference to the accompanying drawings.